

CLAIMS

1. A method of treatment for a mammal, with advanced or large tumor burdens, comprising the administration to said mammal of an immunotherapeutic agent in conjunction with a tumor growth-restricting agent, either of which alone would be ineffective in retarding or eradicating an advanced or large tumor burden.
2. A method of treating a patient with cancer which comprises the step of administering to said patient an immunotherapeutic agent and a tumor growth-restricting agent in amounts which are together effective to eradicate any advanced or large tumors present.
3. A method of potentiating the activity of an immunotherapeutic agent against tumors present in a patient suffering from cancer which comprises the step of administering to said patient when treated with said immunotherapeutic agent an amount of a tumor growth-restricting agent, which is effective, in combination with the immunotherapeutic agent to eradicate any advanced or large tumors present in said patient.
4. A method of potentiating the activity of a tumor growth-restricting agent against tumors present in a patient suffering from cancer which comprises the step of pre-administering to a patient to be treated with said tumor growth-restricting agent an amount of an immunotherapeutic agent which, upon subsequent administration of said tumor growth restricting agent, acts in combination with said tumor growth restricting agent to eradicate an advanced or large tumors present.
5. A method as claimed in any one of claims 1 to 4, wherein the immunotherapeutic agent comprises a T-cell co-stimulatory cell adhesion molecule (CAM) or a mammalian expression vector containing DNA which encodes a T-cell co-stimulatory CAM.
6. A method as claimed in claim 5, wherein the CAM is selected from the group consisting of B7.1, B7.2 and a xenogenic (human) form of an integrin ligand, and combinations thereof.
7. A method as claimed in claim 6, wherein the CAM is B7.1
8. A method as claimed in claim 1, wherein the tumor growth-restricting agent is flavone acetic acid (FAA) or an analogue of xanthenone-4 acetic acid (XAA).

9. A method as claimed in claim 8, wherein the tumor growth-restricting agent is 5,6-dimethylxanthenone-4-acetic acid (DMXAA).
10. A method as claimed in claim 1, wherein the tumor growth-restricting agent is an agent which disrupts the expression or activity of hypoxia-inducible factor-1 (HIF-1).
11. A method as claimed in claim 10, wherein the tumor growth-restricting agent is an expression vector which encodes an anti-sense version of HIF-1.
12. A method as claimed in claim 1, wherein the immunotherapeutic agent is administered prior to the administration of the tumor growth-restricting agent.
13. A method as claimed in claim 12, wherein the immunotherapeutic agent is administered from 12 to 48 hours prior to the administration of the tumor growth-restricting agent.
14. A method as claimed in claim 1, wherein the method further includes the administration of an additional tumor growth-restricting agent.
15. A method as claimed in claim 14, wherein the additional tumor growth-restricting agent comprises an expression vector encoding an anti-sense version of hypoxia-inducible factor-1 (HIF-1).
16. A method as claimed in claim 2, wherein the tumor growth-restricting agent is flavone acetic acid (FAA) or an analogue of xanthenone-4 acetic acid (XAA).
17. A method as claimed in claim 16, wherein the tumor growth restricting agent is 5,6-dimethylxanthenone-4-acetic acid (DMXAA).
18. A method as claimed in claim 2, wherein the tumor growth-restricting agent is an agent which disrupts the expression or activity of hypoxia-inducible factor-1 (HIF-1).
19. A method as claimed in claim 18, wherein the tumor growth-restricting agent is an expression vector which encodes an anti-sense version of HIF-1.
20. A method as claimed in claim 2, wherein the immunotherapeutic agent is administered prior to the administration of the tumor growth-restricting agent.

21. A method as claimed in claim 20, wherein the immunotherapeutic agent is administered from 12 to 48 hours prior to the administration of the tumor growth-restricting agent.
22. A method as claimed in claim 2, wherein the method further includes the administration of an additional tumor growth-restricting agent.
23. A method as claimed in claim 22, wherein the additional tumor growth-restricting agent comprises an expression vector encoding an anti-sense version of hypoxia-inducible factor-1 (HIF-1).
24. A method as claimed in claim 3, wherein the tumor growth-restricting agent is flavone acetic acid (FAA) or an analogue of xanthenone-4 acetic acid (XAA).
25. A method as claimed in claim 24, wherein the tumor growth restricting agent is 5,6-dimethylxanthenone-4-acetic acid (DMXAA).
26. A method as claimed in claim 3, wherein the tumor growth-restricting agent is an agent which disrupts the expression or activity of hypoxia-inducible factor-1 (HIF-1).
27. A method as claimed in claim 26, wherein the tumor growth-restricting agent is an expression vector which encodes an anti-sense version of HIF-1.
28. A method as claimed in claim 3, wherein the immunotherapeutic agent is administered prior to the administration of the tumor growth-restricting agent.
29. A method as claimed in claim 28, wherein the immunotherapeutic agent is administered from 12 to 48 hours prior to the administration of the tumor growth-restricting agent.
30. A method as claimed in claim 3, wherein the method further includes the administration of an additional tumor growth-restricting agent.
31. A method as claimed in claim 30, wherein the additional tumor growth-restricting agent comprises an expression vector encoding an anti-sense version of hypoxia-inducible factor-1 (HIF-1).

32. A method as claimed in claim 4, wherein the tumor growth-restricting agent is flavone acetic acid (FAA) or an analogue of xanthenone-4 acetic acid (XAA).
33. A method as claimed in claim 32, wherein the tumor growth restricting agent is 5,6-dimethylxanthenone-4-acetic acid (DMXAA).
34. A method as claimed in claim 4, wherein the tumor growth-restricting agent is an agent which disrupts the expression or activity of hypoxia-inducible factor-1 (HIF-1).
35. A method as claimed in claim 34, wherein the tumor growth-restricting agent is an expression vector which encodes an anti-sense version of HIF-1.
36. A method as claimed in claim 4, wherein the immunotherapeutic agent is administered prior to the administration of the tumor growth-restricting agent.
37. A method as claimed in claim 36, wherein the immunotherapeutic agent is administered from 12 to 48 hours prior to the administration of the tumor growth-restricting agent.
38. A method as claimed in claim 4, wherein the method further includes the administration of an additional tumor growth-restricting agent.
39. A method as claimed in claim 38, wherein the additional tumor growth-restricting agent comprises an expression vector encoding an anti-sense version of hypoxia-inducible factor-1 (HIF-1).
40. A method as claimed in claim 5, wherein the tumor growth-restricting agent is flavone acetic acid (FAA) or an analogue of xanthenone-4 acetic acid (XAA).
41. A method as claimed in claim 40, wherein the tumor growth restricting agent is 5,6-dimethylxanthenone-4-acetic acid (DMXAA).
42. A method as claimed in claim 5, wherein the tumor growth-restricting agent is an agent which disrupts the expression or activity of hypoxia-inducible factor-1 (HIF-1).
43. A method as claimed in claim 42, wherein the tumor growth-restricting agent is an expression vector which encodes an anti-sense version of HIF-1.

44. A method as claimed in claim 5, wherein the immunotherapeutic agent is administered prior to the administration of the tumor growth-restricting agent.

45. A method as claimed in claim 44, wherein the immunotherapeutic agent is administered from 12 to 48 hours prior to the administration of the tumor growth-restricting agent.

46. A method as claimed in claim 5, wherein the method further includes the administration of an additional tumor growth-restricting agent.

47. A method as claimed in claim 46, wherein the additional tumor growth-restricting agent comprises an expression vector encoding an anti-sense version of hypoxia-inducible factor-1 (HIF-1).

48. A chemotherapeutic pack which comprises, in separate containers, an immunotherapeutic agent and a tumor growth-restricting agent.

49. A chemotherapeutic pack as claimed in claim 48, wherein the immunotherapeutic agent comprises a T-cell co-stimulatory cell adhesion molecule (CAM) or a mammalian expression vector containing DNA which encodes a T-cell co-stimulatory CAM.

50. A chemotherapeutic pack as claimed in claim 49, wherein the CAM is B7.1.

51. A chemotherapeutic pack as claimed in claim 48, wherein the tumor growth-restricting agent is flavone acetic acid (FAA) or an analogue of xanthenone-4 acetic acid (XAA).

52. A chemotherapeutic pack as claimed in claim 51, wherein the tumor growth restricting agent is 5,6-dimethylxanthenone-4-acetic acid (DMXAA).

53. A chemotherapeutic pack as claimed in claim 48, wherein the tumor growth-restricting agent is an expression vector which encodes an anti-sense version of HIF-1.

54. A chemotherapeutic pack as claimed in claim 48, which further includes, in a separate container, an additional tumor growth-restricting agent.

55. A chemotherapeutic pack as claimed in claim 54, wherein the additional tumor growth-restricting agent comprises an expression vector encoding an anti-sense version of HIF-1.